

Bill of Materials: RepRap Gen6, USA Edition

| Line Item | Qty | Value | Device | Parts | Manufacturer Part No. | Mouser | DigiKey | Price ea | Total |
|-----------|-----|------------------|------------------|--|--------------------------------------|----------------------|-------------------|-------------------|---------|
| 0 | 3 | | 61900511121 | CON4, 6, 7 | Würth 61900511121 | | 732-2698-ND | \$1.09 | \$3.27 |
| 1 | 6 | | 61900411121 | CON1, CON9, CON10, CON11, CON12, CON13 | Würth 61900411121 | | 732-2697-ND | \$0.84 | \$5.04 |
| 2 | 4 | 10k | 3314G-1 | R27, R28, R29, R30 | Bourns 3314G-1-103E | 652-3314G-1-103E | | \$1.95 | \$7.80 |
| 3 | 1 | RS485 | 520251-4 | CON2 | TE Connectivity 5520251-4 | | 31407-ND | \$1.28 | \$1.28 |
| 4 | 1 | USB | 61400416121_GND | CON3 | Würth 61400416121 | 710-61400416121 | 732-2108-ND | \$2.17 | \$2.17 |
| 5 | 1 | ATMEGA644ATQFP44 | ATMEGA644ATQFP44 | IC3 | Atmel ATMEGA644PA-AU | | ATMEGA644PA-AU-ND | \$7.39 | \$7.39 |
| 6 | 1 | RESET | B3FS-10XX | S1 | Omron B3FS-1000P | 653-B3FS-1000 | SW423CT-ND | \$0.53 | \$0.53 |
| 7 | 1 | 22n | C-EUC0603 | C18 | TDK CGA3E2X8R1H223K | 810-CGA3E2X8R1H223K | | \$0.13 | \$0.13 |
| 8 | 2 | 22p | C-EUC0603 | C1, C2 | Kemet C0603C220J4GACTU | 80-C0603C220J4G | | \$0.31 | \$0.62 |
| 9 | 0 | 47p | C-EUC0603 | C41, C42 | DO NOT PLACE | DO NOT PLACE | DO NOT PLACE | | \$0.00 |
| 10 | 12 | 100n | C-EUC0603 | C3, C4, C5, C7, C8, C9, C10, C19, C21, C23, C25, C40 | Kemet C0603C104K3RACTU | 80-C0603C104K3R | | \$0.09 | \$1.08 |
| 11 | 9 | 220p | C-EUC0603 | C17, C20, C22, C24, C26, C32, C33, C34, C35 | AVX 0603YC221KAT2A | 581-0603YC221KAT2A | | \$0.02 | \$0.18 |
| 12 | 2 | 4u7 | C-EUC1206 | C11, C12 | TDK CGA5L1X7R1E475K | 810-CGA5L1X7R1E475K | | \$0.43 | \$0.86 |
| 13 | 1 | 10u | C-EUC1206 | C6 | Kemet C1206C106K3PACTU | 80-C1206C106K3P | | \$0.62 | \$0.62 |
| 14 | 12 | 220n | C-EUC1206 | C13, C14, C15, C16, C28, C29, C30, C31, C36, C37, C38, C39 | TDK C3216X7R1E224MT | 810-C3216X7R1E224M | | \$0.74 | \$8.88 |
| 15 | 1 | EEEFK1V101P | CPOL-EUF | C27 | Panasonic EEE-FK1V101P | 667-EEE-FK1V101P | | \$0.61 | \$0.61 |
| 16 | 1 | 16MHz | CRYSTALHC49UP | Q1 | TXC Corporation 9C-16.000MAAJ-T | | 887-1059-1-ND | \$0.53 | \$0.53 |
| 17 | 1 | STPS2L40U | DIODE-SMB | D1 | STMicroelectronics STPS2L40U | 511-STPS2L40U | | \$0.53 | \$0.53 |
| 18 | 4 | DRV8811 | DRV8811 | IC5, IC6, IC7, IC8 | Texas Instruments DRV8811PWP | 595-DRV8811PWP | | \$4.40 | \$17.60 |
| 19 | 1 | FT232RL | FT232RL | IC2 | FTDI FT232RL-REEL | 895-FT232RL | | \$4.05 | \$4.05 |
| 20 | 1 | L5970D | L5970D | IC4 | STMicroelectronics L5970D | 511-L5970D | | \$2.28 | \$2.28 |
| 21 | 1 | Debug | LEDCHIP-LED0805 | LED1 | Lite-On LTST-S220GKT | 859-LTST-S220GKT | | \$0.11 | \$0.11 |
| 22 | 1 | HEAT | LEDCHIP-LED0805 | LED3 | Lite-On LTST-S220GKT | 859-LTST-S220GKT | | \$0.11 | \$0.11 |
| 23 | 1 | Power | LEDCHIP-LED0805 | LED2 | Lite-On LTST-S220GKT | 859-LTST-S220GKT | | \$0.11 | \$0.11 |
| 24 | 1 | ICSP | MA03-2 | CON5 | FCI 67996-106HLF | 649-67996-106HLF | 609-3202-ND | \$0.24 | \$0.24 |
| 25 | 1 | IRF8714PBF | MOSFET_N_SO8 | T1 | International Rectifier IRF8714TRPBF | | IRF8714TRPBFCT-ND | \$0.53 | \$0.53 |
| 26 | 6 | 1k | R-EU_R0603 | R1, R3, R7, R15, R17, R24 | Bourns CR0603-FX-1001ELF | 652-CR0603FX-1001ELF | | \$0.05 | \$0.30 |
| 27 | 2 | 1k8 | R-EU_R0603 | R14, R16 | Panasonic ERJ-3EKF1801V | 667-ERJ-3EKF1801V | | \$0.04 | \$0.08 |
| 28 | 1 | 3k6 | R-EU_R0603 | R13 | Panasonic ERJ-3EKF3601V | 667-ERJ-3EKF3601V | | \$0.04 | \$0.04 |
| 29 | 4 | 3k9 | R-EU_R0603 | R19, R20, R21, R22 | Panasonic ERJ-3EKF3901V | 667-ERJ-3EKF3901V | | \$0.04 | \$0.16 |
| 30 | 5 | 4k7 | R-EU_R0603 | R6, R10, R11, R25, R35 | Panasonic ERJ-3EKF4701V | 667-ERJ-3EKF4701V | | \$0.04 | \$0.20 |
| 31 | 2 | 10k | R-EU_R0603 | R2, R9 | Panasonic ERJ-3EKF1002V | 67-ERJ-3EKF1002V | | \$0.04 | \$0.08 |
| 32 | 1 | 11k | R-EU_R0603 | R12 | Panasonic ERJ-3EKF1102V | 667-ERJ-3EKF1102V | | \$0.04 | \$0.04 |
| 33 | 1 | 100k | R-EU_R0603 | R26 | Panasonic ERJ-3EKF1003V | 667-ERJ-3EKF1003V | | \$0.04 | \$0.04 |
| 34 | 4 | 180r | R-EU_R0603 | R4, R5, R8, R18 | Panasonic ERJ-3EKF1800V | 667-ERJ-3EKF1800V | | \$0.04 | \$0.16 |
| 35 | 8 | 220k | R-EU_R0603 | R36, R37, R38, R39, R40, R41, R42, R43 | Panasonic ERJ-3EKF2203V | 667-ERJ-3EKF2203V | | \$0.04 | \$0.32 |
| 36 | 1 | 270r | R-EU_R0603 | R23 | Bourns CR0603-FX-2700GLF | 652-CR0603-FX2700GLF | | \$0.04 | \$0.04 |
| 37 | 8 | 0r22 | R-EU_R1210 | R31, R32, R33, R34, R44, R45, R46, R47 | Vishay RCWE1210R220FKEA | 71-RCWE1210R220FKEA | | \$0.96 | \$7.68 |
| 38 | 1 | SN75176AD | SN75176AD | IC1 | Texas Instruments SN75176ADR | 595-SN75176ADR | | \$0.67 | \$0.67 |
| 39 | 1 | POWER | WEIDMULLERSL2 | CON14 | Molex 39502-1002 | 538-39502-1002 | | \$1.00 | \$1.00 |
| 40 | 1 | 744066221 | WE-TPC_XL/XLH | L1 | Würth 744066221 | 710-744066221 | 732-1084-1-ND | \$3.51 | \$3.51 |
| | | | | | | | | COMPONENTS TOTAL: | \$80.87 |

Non-PCB Components (Sensor, Motor, and Power Connectors)

| Qty | Value | Device | Parts | Manufacturer Part No. | Mouser | DigiKey | Price ea | Total |
|-----|-------|--------|------------------------------|--------------------------------|----------------|---------|---------------|---------|
| 1 | | | Mating Connector for 12V-2 | Molex 39500-0002 | 538-39500-0002 | | \$1.37 | \$1.37 |
| 6 | | | 4-Pin, Male headers for Mo | Molex 22-01-3047 | 538-22-01-3047 | | \$0.35 | \$2.10 |
| 3 | | | 5-Pin, Male Headers for Enc | Molex 22-01-3057 | 538-22-01-3057 | | \$0.36 | \$1.08 |
| 39 | | | Gold-Plated Molex Pins for I | Molex 08-55-0101 | 538-08-55-0101 | | \$0.11 | \$4.29 |
| 3 | | | X/Y/Z-Axis Opto Sensors (or | Vishay Semiconductors TCST2103 | 782-TCST2103 | | \$1.26 | \$3.78 |
| | | | | | | | WIRING TOTAL: | \$12.62 |